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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/613,803

07/03/2003

Takae Ito

2803.68136

7339

7590

04/19/2005

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EXAMINER

VU, PHU

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/613,803

Applicant(s)

ITO, TAKAE

Examiner

Phu Vu

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Remarks (filed 1/18/2005)
2. Claims 1-3 are presented for examination.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in the prior office action.

### ***Response to Arguments***

Applicant's arguments, see Remarks, filed 1/18/2005, with respect to the rejection(s) of claim(s) 1-3 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Murakami et. al. US Patent No. 6525718 and Sato et. al US Patent No. 6,345,887.

**Claims 1-3 are rejected under 35 U.S.C. 103(a) as being obvious over Murakami et. al US Patent No. 6525718 and further in view of Sato et. al. US Patent No. 6345887.**

Murakami teaches a liquid crystal display device comprising: a liquid crystal panel displaying an image (fig.1B element 9); and at least one flexible printed circuit board (fig. 1B element 4) arranged on one side of the liquid crystal panel and having

driver ICs (fig. 1B element 7) mounted thereon and the driver ICs are cascaded with respect to the input signals. Murakami fails to teach two driver ICs that are mounted on each flexible printed circuit board. Sato teaches two driver ICs (fig. 2 element 15) mounted on a single printed circuit board (see fig. 2 element 12). Sato's driver ICs are not cascaded however the primary reference teaches the driver ICs are cascaded with the respect to the inputs as the inputs 16, 17 and 18 of figure 1B are cascaded. Multiple ICs on a single circuit board can be done for a number of reasons such as allowing for faster production as multiple ICs can be mounted at one time, or reduce the amount of cutting required on the PCB, or reduce the total amount area of the PCB needed. Therefore, at the time of the invention, it would have been obvious to include two driver ICs on a single PCB to increase production speed or reduce the amount of materials needed.

**Regarding claim 2**, the primary reference teaches a printed circuit board arranged along one side of the LCD panel, at least one flexible printed circuit board comprising a plurality of flexible printed circuit boards which connect the liquid crystal panel to the printed circuit board.

**Regarding claim 3**, the primary reference each of the flexible printed circuit boards has input terminals which has same number of that one IC. Also even when combined with Sato as in the rejection of claim 1, the references would still have the same number as of one driver IC as each of the driver ICs along one side of the panel is cascaded.

***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu Vu whose telephone number is (571)-272-1562.

The examiner can normally be reached on 8AM-5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571)-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phu Vu  
Examiner  
AU 2871

  
DUNG T. NGUYEN  
PRIMARY EXAMINER